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ABSTRACT

Purpose of the study was to investigate the relative impact of family income on the level of educational aspirations and expectations of high school students. Information on educational aspirations and expectations of 119 Native Americans and 304 non-Indian youth attending 4 small rural high schools in Montana was obtained by questionnaire. It was found that 9% fewer Indians than non-Indians aspired to attend 4 years of college, and 10% fewer Indians than non-Indians expected to attend 4 years of college. When grouped by family income, 48% of the high-income Indian students held aspirations for a college degree, but only 33% held the same expectations. Comparable percentages for high-income non-Indian students were 61% and 54%, indicating greater goal deflection among Indian students. There was little difference between the educational aspirations and expectations of low-income Indian and non-Indian students. A related document is RC005683. (LS)

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Montana Agricultural Experiment Station
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A COMPARISON OF THE DIFFERENTIAL EFFECT OF ETHNICITY AND PERCEPTION OF FAMILY INCOME ON EDUCATIONAL ASPIRATIONS, PREPARATION, AND PARENTAL INFLUENCE-ATTEMPTS OF INDIAN AND NON-INDIAN STUDENTS IN FOUR RURAL HIGH SCHOOLS IN MONTANA

Wayne L. Larson*

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INTRODUCTION

A report from a national committee formed to study Indian education in the United States labeled its report, Indian Education: A National Tragedy - A National Challenge. To support the legitimacy of the title they cited some statistics to depict the dimensions of the tragedy. A few are listed below:

1. The average educational level for all Indians under Federal supervision is five school years.
2. More than one out of every five Indian men have less than five years of schooling.
3. Dropout rates for Indians are twice the national average.
4. Only three percent of Indian students who enroll in college graduate; the national average is 32 percent.[1]

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[1]Indian Education: A National Tragedy - A National Challenge. 1969 Report of the Committee on Labor and Public Welfare, United States Senate, U.S. Government Printing Office, Washington: 1969, pp. xii-xiii.

A recent study of dropouts among Indian school children in Montana revealed that dropout rates were relatively high compared to non-Indian students in the state and nation.[2]

There are many reasons for the national and state tragedy. Only the most frequently reported reasons will be presented in this paper. They are presented below, not necessarily in order of importance or frequency of citation.

The general description of Indians in textbooks that Indian children read has been given as a reason for prejudiced attitudes of teachers and other children toward Indian children, and possibly the negative self concepts of Indian students.[3] There is disproportionate representation of Indian school board members, teachers, and administrative officials in the school systems.[4] Many Indian children are bilingual. One government agency reported that "one-half to two-thirds of Indian children enter school with little or no skill in the English language."[5] A recent conference on Indian education listed seven causes

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[2]Alphonse D. Selinger. The American Indian High School Dropout: The Magnitude of the Problem. Northwest Regional Educational Laboratory, Portland, Oregon. September, 1969.

[3]Indian Education: A National Tragedy - A National Challenge, pp. 23.

[4]Ibid, pp. 24-25.

[5]Ibid, pp. 28.

of the under-achievement of Indian students: "(1) unqualified teachers, (2) poverty, (3) inadequate textbooks, (4) poor home environment, (5) anti-prejudice of classmates, (6) unsympathetic administrators, and (7) lack of communication between races."[6] Bryde's work and experiences have convinced him that alienation accounts for much of the variation in scholastic failure.[7] A report from the national study mentioned above (Indian Education: A National Tragedy - A National Challenge) supports Bryde's arguments in one of its summary statements. "Study after study shows Indian children growing up with feelings of alienation, hopelessness, powerlessness, rejection, depression, anxiety, estrangement, and frustration."[8] Research on alienation and anomie also indicates that these feelings are shared by people with low levels of income, education, and occupational prestige regardless of ethnicity or race.[9] Hobart introduces the concept of a "damaged" self-concept as one cause or

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[6]Cited in Berry, Brewton. The Education of American Indians: A Survey of the Literature. Special Subcommittee on Indian Education, Committee on Labor and Public Welfare, United States Senate, U.S. Government Printing Office, Washington: 1969. p. 31.

[7]Bryde, S. J. "The Sioux Indian Student: A Study of Scholastic Failure and Personality Conflict," PhD. Dissertation, University of Denver, 1965.

[8]Indian Education: A National Tragedy - A National Challenge, p. 28.

[9]Bell, Wendell. "Anomie, Social Isolation, and the Class Structure," Sociometry, 1957, p. 105-116; Bell, Dorothy L. and Wendell, "Anomia and Differential Access to the Achievement of Life Goals," American Sociological Review, Vol. 24, 1959, p. 189-202; Mizruchi, Ephraim H., "Aspiration and Poverty: A Neglected Aspect of Merton's Anomie," Sociological Quarterly, Vol. 8, 1967. p. 439-446.

correlate of under-achievement.[10] The self-concept was reported as varying with level of income in a study of rural students in the State of Washington, i.e., the lower the income the "lower" the self concept on several dimensions of self-definition.[11] The Coleman report indicated that reading comprehension, verbal ability and "low" self concept are three factors which contribute to the disadvantaged position of American Indians during the period of time between entry and departure from the school system.[12]

In summary, these findings indicate that poverty, prejudice and discrimination, bilingualism and problems of verbalization and reading comprehension combined with additive and interactive effects of alienation and negative self-concepts are critical factors in accounting for variation in educational aspirations and performance of Indian students. A note of caution about interpretation and evaluation of these findings should be inserted at this point. First, there is considerable variation among the Indian student population, i.e., some Indian students perform considerably above average in school and aspire to equal or

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[10]Hobart, Carl W., "Underachievement Among Minority Students: An Analysis and a Proposal," Phylon, Vol. 24, #2, 1963. p. 184-196.

[11]Larson, Wayne L. and Walter L. Slocum, "The Impact of Poverty on Rural Youth: An Analysis of the Relationship Between Family Income and Educational Aspirations, Self-concept, Performance, and Values of Rural High School Students," Washington Agricultural Experiment Station, Washington State University, Pullman, Washington, Bull. 714, Sept., 1969. p. 9.

[12]Coleman, James S., et.al. Equality of Educational Opportunity, U.S. Office of Education, 1966. Table 3.13.11, p. 287.

higher levels of achievement as the Coleman report indicates. Second, some of the studies summarized in these findings are not based on systematic procedures, nor do they control for the effects of other variables or attributes such as parental income, education, and influence. Third, there is considerable variation in average levels of aspiration and performance between schools, states, and, possibly, tribal affiliation.

The findings from these studies provide additional support for the general proposition that some, to many, students whose parents are classified as members of the lower class in their communities eventually suffer the consequences of social placement of their parents, e.g., some, to many, parents identified as members of the lower social class in their communities do not have the resources to support their children in ways which would facilitate the development of values, skills, and positive conceptions of themselves which would contribute to completion of educational requirements essential to entrance into the labor force in their community or other communities.

It was necessary to develop a hypothesis which would be indicative of the general proposition above. The indicator which was selected to place parents of students into categories of social class was parental income. Thus, the indicator of social class position used in this study is only a partial definition of social class. Therefore, the explicit inferences presented in the findings refer to levels of family income rather than social class rank of parents. Hence, variation in income of

parents should account for some of the variation in educational aspirations and performance of Indian students. That is, cultural differences, e.g., bilingualism different values and beliefs, etc., are certainly important factors in accounting for variation in educational performance as Coleman's report clearly demonstrated. However, the studies of Indian education have given more attention to cultural differences than income differentials. Hence, the specific hypothesis of this study is: The percentage differences on responses to questions about educational aspirations, expectations, preparation and influence attempts between Indian and non-Indian students will not be any greater than differences between equivalent income groups of Indian and non-Indian students.

Previous work has established the negative impact of low income on educational performance, aspirations and plans. Therefore, the primary objective of this research is not with providing more support for this connection, rather the concern is with comparing differences between Indian and non-Indian students on several measures related to attitudinal and performance dimensions of the educational experiences of these students. If the differences between Indian and non-Indian students (percentages reported) is equal to or greater than the differences between Indian and non-Indian students at equivalent levels of family income, then one can tentatively infer that differentials in income are as likely to account for variation in some areas of educational performance as ethnicity. If this can be demonstrated, one can suggest that programs that concentrate solely on cultural differences and ignore the implications of income differentials will not be effective in ameliorating educational performances

of students. That is, income maintenance, improving employment and employment opportunity, and job training will be essential dimensions of amelioration.

THE SAMPLE

The sample of schools was drawn from all schools in the State of Montana in which Indian students were enrolled. The major objective in sampling was to select schools with particular characteristics so that substantive rather than generalization hypotheses could be tested. Therefore, schools were selected for inclusion on the basis of the following criteria:

1. proportion Indian student enrollment,
2. dropout rate for schools reported in previous study,
3. total size of student enrollment, and
4. type of school, e.g., Federal boarding, private, public.

Two schools refused to cooperate in the study for legitimate reasons.[13] Unfortunately the refusals created gaps in the range of proportions of Indian student enrollment and dropout rate, e.g., there are no schools in the 50-90 percent range as planned.

The sample of students used in the analysis includes all students enrolled in four rural high schools in Montana on the day the questionnaires were administered. The total number in the sample was 126 Indian and 331 non-Indian students. Of this total 119 Indian and 304 non-Indian questionnaires were used in the analysis. A detailed breakdown of the sample by sex, residence and ethnicity and levels of income is reported in Table 1.

[13]The request for participation came too late in the year for one of the schools, and another had just recently been studied by another agency.

TABLE 1

PROPORTION OF RESPONDENTS IN LOW, AVERAGE AND HIGH INCOME GROUPINGS BY SEX, RESIDENCE AND ETHNICITY

Ethnicity	Sex or Residence	Low	%	Average	%	High[a]	%[b]	Total
All Students	Male	62	31	88	44	51	25	201
All Students	Female	68	32	79	38	64	30	211
All Students	Farm	44	26	76	46	47	28	167
All Students	Non-farm	89	35	95	37	72	28	256
Indian[c]	Male	18	35	25	49	8	16	51
Indian	Female	31	46	21	31	16	23	68
Indian	Farm	5	24	9	43	7	33	21
Indian	Non-farm	44	45	37	38	17	17	98
Non-Indian	Male	44	29	63	42	43	29	150
Non-Indian	Female	37	26	58	41	48	34	143
Non-Indian	Farm	39	27	67	46	40	27	146
Non-Indian	Non-farm	45	28	58	37	55	35	158

[a]Totals will differ because of different response rates to questions about sex and residence.

[b]Total percentage by rows do not necessarily add to 100 percent due to rounding.

[c]If students checked "Indian" on a question asking them to identify themselves on the basis of several ethnic categories, we assumed they were Indian students.

The data by sampling criteria (1-4 above) will not be reported in this paper but will be introduced if it is considered relevant in interpretation and evaluation of the findings.

PROCEDURE

In order to test the hypothesis, eleven questions from the questionnaire were selected as relevant to educational aspirations, preparation, and influence. Five of the questions are students' responses to questions about their educational aspirations, expectations, and preparations. Six of the questions include students' opinions about parental influence on educational aspirations, expectations, or performance. The income measure used was developed from two questions about family income. They were asked together (adjacent vertically), but the ordering of income from high to low was reversed in the second question.[14] An examination

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[14]The questions were asked in the following form:

First Question: In terms of income or wealth in my community, I think my family is:

1. considerably above average
2. somewhat above average
3. average
4. somewhat below average
5. considerably below average

Second Question: How well-off is your family?

1. hardly able to make a living
2. have just enough to live on
3. pretty well off
4. very well off
5. pretty rich

Table 2. Percentage differences between responses of Indian and non-Indian students to selected questions about education by levels of perceived family income.[a]

Questions about Education	High & Low Income Combined Indian %	High & Low Income Combined Non-Indian %	Percentage Difference	High Income Indian %	High Income Non-Indian %	Percentage Difference	Low Income Indian %	Low Income Non-Indian %	Percentage Difference
1. Amount of thought given educational plans*A LOT[b]	48	51	- 3	58	58	0	43	44	- 1
2. Students' educational aspirations-COLLEGE[c]	44	53	- 9	48	61	-13	41	44	- 3
3. Students' educational expectations-COLLEGE[c]	32	42	-10	33	54	-21	31	30	+ 1
4. No. of times students discussed educational plans with counselor-3 OR MORE	8	7	+ 1	0	11	-11	12	3	+ 9
5. No. of teachers students discussed educational plans with-3 OR MORE	9	17	- 8	8	20	-12	22	13	+ 9
6. Fathers' educational aspirations for their children-COLLEGE[c]	38	58	-20	58	66	- 8	24	48	-24
7. Mothers' educational aspirations for their children-COLLEGE[c] *	45	60	-15	53	67	-14	40	52	-12
8. Fathers' interest in school work of their children*-A LOT	47	63	-16	63	69	- 6	40	55	-15
9. Mothers' interest in school work of their children*-A LOT	64	69	- 5	74	74	0	60	63	- 3
10. Fathers' pressure on their children to do well in school work-QUITE A BIT + A LOT	31	24	+ 7	58	28	+30	19	20	- 1
11. Mothers' pressure on their children to do well in school work-QUITE A BIT + A LOT	38	35	+ 3	24	27	- 3	53	38	+15

[a]Average level of income was not included in the analysis

* Indicates confirmation of the hypothesis

b The percentages in the "high" or "highest" category or a combination of high categories is presented for each question

c College indicates 4-year college degree or higher

of the responses to the income questions indicated that some students were making "errors" (answers to one question seemed to contradict answers to the other) in answering one of the questions, and one of the ethnic groups used the "average" category on one of the questions disproportionately. Therefore, responses from both questions were used to divide both ethnic groups into low, average, and high income groupings.[15] All students who contradicted themselves, e.g., checked above average on one question and below average on the next were excluded from the sample used in the analysis.

For all cases in which levels of perceived family income were compared with educational measures, the "high", or combination of "high", categories on the educational measure was used for comparison between responses of Indian and non-Indian students. An attempt was made to classify student responses to questions about education on the basis of everyday language, e.g., "quite a bit" plus "a lot" was considered high. The tables from which the comparative information was taken are presented at the end of this paper, Tables 4, 5 and 6.

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[15]Answers to part (1) and (2) on the first question and (1) or (2) on the second question were treated as "errors," and answers to (4) and (5) on the first question followed by checking (4) or (5) on the second question were treated in the same way. Other patterns of checking were adjusted upward or downward from average, i.e., if "average" was checked on the first question and "have just enough to live on" was checked on the second question, the respondent was classified as a "low" income case. If the respondent checked "average" on the first question and "very well off" on the second he would have been classified as a "high" income case, etc. However, there were only six errors resulting from this checking procedure.

FINDINGS

The percentage differences to responses on the eleven questions are reported in Table 2. They are presented in the table as follows: First, the percentage differences between the responses of all Indian and all non-Indian students to selected questions about education are presented for students who perceived their family income as either "low" or "high." Those students who indicated by their responses that their family income was average were not included in the analysis because the interest in this analysis was in the extreme ranges of income, i.e., low and high income. Second, the percentage difference between responses of Indian and non-Indian students reporting high income are presented, and last, the percentage differences between responses of Indian and non-Indian students reporting low income are presented.

If the percentage difference between responses of Indian and non-Indian students in the low income group, and the high income group, is less than the percentage difference between responses of Indian and non-Indian students in the combined income group (low plus high income combined), there is evidence in support of the hypothesis that income as reported in this study accounts for some of the variation between responses of Indian and non-Indian students in the combined income group to selected questions about education. If, however, the percentage differences

Table 3. Percentage difference between responses of students to selected questions about education by ethnicity and levels of perceived family income.[a]

Questions about Education	Indian			Non-Indian		
	High Income	Low Income	Difference Between High & Low Income	High Income	Low Income	Difference Between High & Low Income
1. Amount of thought given educational plans-A LOT	58	43	+15	58	44	+14
2. Students' educational aspirations-COLLEGE	48	41	+ 7	61	44	+17
3. Students' educational expectations-COLLEGE	33	31	+ 2	54	30	+16
4. No. of times students discussed educational plans with counselor-3 OR MORE	0	12	-12	11	3	+ 8
5. No. of teachers students discussed educational plans with-3 OR MORE	8	22	-14	20	13	+ 7
6. Fathers' educational aspirations for their children-COLLEGE	58	24	+34	66	48	+18
7. Mothers' educational aspirations for their children-COLLEGE	53	40	+13	67	52	+15
8. Fathers' interest in school work of their children-A LOT	63	40	+23	69	55	+14
9. Mothers' interest in school work of their children-A LOT	74	60	+14	74	63	+11
10. Fathers' pressure on their children to do well in school work-QUITE A BIT + A LOT	58	19	+39	28	20	+ 8
11. Mothers' pressure on their children to do well in school work-QUITE A BIT + A LOT	24	53	-29	27	38	-11

[a]The response categories for which percentages are reported are identical to those reported in Table 2.

between responses of Indian and non-Indian students in the low income group, and the high income group, is greater than the percentage difference between the responses of Indian and non-Indian students in the combined income group, there is no support for the hypothesis that level of perceived family income accounts for some of the variation in percentage difference between responses of Indian and non-Indian students in the combined income group to selected questions about education.

There is support for the hypothesis on four questions—amount of thought given to education, mothers' educational aspirations, fathers' interest in school work, and mothers' interest in school work. However, the reduction in percentage difference when low and high levels of family income were introduced was very small, ranging from one percent to ten percent. Therefore, any conclusions about level of perceived family income accounting for variation in percentage difference between responses of Indian and non-Indian students to these four questions should be suggestive rather than definitive. A comparison of the percentage differences between Indian and non-Indian students in the low income group with the responses in the combined income group suggests that low income accounts for some of the variation in the percentage difference in the combined income groups for the questions about educational aspirations and expectations of students, and fathers' pressure on their children to do well in school work, a percentage reduction of 6, 9 and 6 percent respectively. High income accounts for some variation in percentage difference in the combined income group for questions about fathers'

educational aspirations for their children, a percentage reduction of 12 percent. Level of perceived family income has no effect on number of times students talk to counselors about their educational plans or the number of teachers with whom they have discussed their educational plans; an increase in the percentage difference was reported for comparisons in both the low and high income groups. The data from responses to all questions suggests that level of perceived family income accounts for some difference between Indian and non-Indian students' responses to questions about education but the variation accounted for is minimal. Therefore, an adequate explanation of the differences between Indian and non-Indian students must take into account other factors than income, e.g., the cultural differences suggested in the literature reported above.

One interesting finding should be noted. The percentage difference between responses of Indian and non-Indian students to the questions about fathers' pressure on their children to do well in their school work was 30 percent as compared to 3 percent for mothers' pressure in the high income group. However, in the low income group the percentage difference was one percent for fathers and 15 percent for mothers. Thus, fathers in the high income group were reported to have put more pressure on students, whereas, mothers applied more pressure in the low income group. These data are consistent with findings from other studies which indicate mothers from low income families are more likely than fathers to make attempts to influence their childrens' educational goals. Additional support for this finding is reflected in the difference between fathers

and mothers in the non-Indian and low income group of students. For example, Indian students in this group indicated that 53 percent of their mothers put high pressure on them to do well in their school work as opposed to 19 percent for fathers, and non-Indian students reported that 38 percent of the mothers put high pressure on them as opposed to 20 percent of their fathers. Thus, in both groups, Indian and non-Indian students report that mothers put more pressure on them to do well in their school work if students reported low family income. However, these data do not mean that mothers in the high income families lack interest in their childrens' education. An examination of the percentages reported for mothers' interest in school work and educational aspirations for their children in the high income group of students indicate that students thought that mothers had higher interest than fathers, and the difference in educational aspirations between fathers and mothers was small, one and five percent, respectively. An evaluation of the responses to questions about parents aspirations and interest in school work should include a note about the possibility that these questions may produce more culturally desirable answers for both parents than the question about "pressure," however, the writer is not aware of any data to support this notion.

An examination of the data in Table 2 will reveal differences in responses between students reporting low and students reporting high income by ethnicity. A comparison of these differences is reported in Table 3.

Eight of the eleven comparisons indicate that the percentage differences between responses of low and high income Indian students are greater than equivalent percentage differences for non-Indian students, questions 1, 4, 5, 6, 8, 9, 10 and 11. The greatest difference between Indian and non-Indian students compared on equivalent income groups (low versus high income) were noted for students' educational aspirations and expectations, fathers' educational aspirations for their sons or daughters, and mothers' and fathers' pressure on their sons or daughters to do well in their school work. If different levels of income as measured in this study account for differences in the educational goals of students, it is evident that it tends to make more of a difference for Indian students, especially in the case of questions about fathers' aspirations and pressure on children to do well in their school work. However, a note of interpretation of this tentative conclusion is necessary. It is quite possible that there are differences in cultural ideas, and behavior of students and parents which may be accounted for by level of family income, i.e., Indians with higher levels of income may be more assimilated into the dominant white culture than those with lower levels of family income. Assuming they internalize the middle-class value of the importance and desirability of education, one could then hypothesize that their values might be reflected in their relations with their children. In order to examine this notion, data

in Table 2 on differences between responses of Indian and non-Indian students within low income and high income groups were examined. The examination indicated no support for this notion in the case of students (Questions 1-5). However, there is some support for this line of reasoning in the case of students' reports of their parents' behavior. Indian fathers in high income groups are more similar (lower percentage differences between Indian and non-Indian reports) to non-Indian fathers than they are in the low income group for questions about fathers' educational aspirations for their sons or daughters (Question 6) -8 and -24 percent respectively, and on fathers' interest in school work (Question 8), -6 and -15 percent respectively. Similar findings were reported for mothers' interest in school work. It should also be noted that Indian fathers in the high income group were more likely to apply "high" pressure than non-Indian fathers in the high income group, 58 and 28 percent respectively. The latter finding may reflect a need to apply more pressure in order to offset the impact of other cultural factors, or influence of students' peers, especially close friends. Data from the more comprehensive study from which the data for this paper were extracted would suggest that this may be the case since a much higher proportion of Indian than non-Indian students reported that their friends "sometimes get into trouble with teachers and school officials" and "they would probably quit high school if they could find a way...", and a lower proportion reported that they "enjoy high school" and that "they participated in "academic activities." These interpretations are somewhat

speculative and the hypotheses suggested by them require more efficient research designs in order to make definitive statements about the interaction effects of income and ethnicity on the educational values of students and parental influence on those values.

DISCUSSION AND CONCLUSION

The findings lend some support for some questions to the hypothesis about relative impact of family income versus ethnicity. However, the lack of support on a majority of the questions doesn't permit definitive statements about the relationship between family income and educational aspirations, expectations and parental influence. The findings also suggest that other factors, e.g., cultural differences may need to be taken into account. The data did show that Indian students thought that fathers in the high-income group, and mothers in the low-income group were more influential with regard to influence on educational goals and concern about students' educational performance.

Family income, as reported by students, did make a consistent difference in the level of educational aspiration and expectations of students, and the amount of thought they had given to educational plans as shown by the higher proportions in the "high" categories on these questions for students in the high income group. However, findings on the amount of discussion of educational plans with counselors and teachers were different for the two groups of students; Indian students in the low-income group reported more discussion with counselors and had talked with more teachers than Indian students in the high-income group, whereas,

the opposite was reported for non-Indian students. The conclusion in the findings about the impact of ethnicity and income on advice and assistance in educational planning from school personnel was that income appeared to have no effect on advice and assistance as measured in this study. Thus, ethnicity, or a correlate of ethnicity, accounts for these differences. Any attempt on the part of the researcher to account for these correlates would be purely speculative at this time, but the difference will be explored in the future.

Although the intent was not to provide more support for the positive correlation between level of family income and level of educational support by parents, this study did provide additional support for this relationship, especially for Indian students' reports of their fathers' opinions and behavior.

The differences between Indian and non-Indian students were not of sufficient magnitude to make definitive statements about reasons for the differences which could be accounted for by ethnicity. Furthermore, the data in this study do not permit inferences about factors associated with ethnicity.

A comment about the measure of family income used in this study may be instructive. All attempts to measure income are subject to error but precautions were taken to decrease the probability of increasing imprecision in measurement by eliminating those student responses from

the analysis that appeared to be contradictory.[16] Previous work by the author indicated that changes in the direction of relationships were seldom reported when students' perceptions of family income were compared with actual dollar income as reported by the parents of those students.[17] Nevertheless, special precautions should be taken in interpretation, i.e., findings apply to perception of family income and should not be equated with actual dollar income, gross or net. The inclusion of a measure of family income which included parents' report of actual dollar income adjusting for size of family, age composition of the family and a cost of living index may have added new insights. Also, hypotheses testing the relationship between levels of family income and educational aspirations, plans, etc., should be tested with statistical controlling procedures that permit controls for specific dimensions of cultural differences between Indians and non-Indians.

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[16] Data from previous work indicated that the magnitude of the measure of association was higher for parental report of actual dollar income than for students' perception of income as measured by question number one in this study for the relationship between family income and educational aspirations and expectations, occupational aspirations and expectations, semesters of vocational course work taken or anticipated taking in high school. (See Larson and Slocum, 1969, Tables 4-5, and 22-29.) The gamma for the relationship between students' perception of family income and parents report of dollar income was .596 for boys and .566 for girls. Therefore, we might expect that the differences reported here might even be greater in the direction of the confirmation of the hypothesis.

[17] Larson, Wayne L. "Impact of Poverty on Rural Youth," paper read at Northwest Scientific Association, March 27-28, 1970, Salem, Oregon. Table 1.

IMPLICATIONS

The data provided some support for the argument that ameliorative programs which concentrate solely on cultural differences to the exclusion of income differentials may be only partially successful. If average levels of income are raised, the probability of a concomitant rise in levels of educational aspirations, expectations of students and parental influence on their childrens' educational values and performance may be expected. To the extent that the latter is worth achieving, the former is worth undertaking.

Table 4. Responses of Indian students to selected questions about education by proportion responding in "high"[a] category of each question by levels of perceived family income.

Questions about Education	LOW INCOME		AVERAGE INCOME		HIGH INCOME		TOTAL	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
1. Amount of thought given educational plans-A LOT	21	43	19	41	14	58	54	45
2. Students' educational aspirations-COLLEGE	19	41	18	42	11	48	48	43
3. Students' educational expectations-COLLEGE	15	31	11	25	8	33	34	29
4. No. of times students discussed educational plans with counselor-3 OR MORE	5	12	7	19	0	0	12	12
5. No. of teachers students discussed educational plans with-3 OR MORE	2	22	0	0	1	8	3	5
6. Fathers' educational aspirations for their children-COLLEGE	7	24	12	43	11	58	30	40
7. Mothers' educational aspirations for their children-COLLEGE	15	40	18	50	10	53	43	47
8. Fathers' interest in school work of their children-A LOT	17	40	22	61	12	63	51	52
9. Mothers' interest in school work of their children-A LOT	27	60	31	82	14	74	72	71
10. Fathers' pressure on their children to do well in school work-QUITE A BIT + A LOT	8	19	10	29	11	58	29	30
11. Mothers' pressure on their children to do well in school work-QUITE A BIT + A LOT	9	53	25	39	4	24	38	39

[a]The "high" category for each question was developed from the responses students would use in everyday language, e.g., quite a bit and/or a lot, or from natural or logical scales, e.g., a "high" level of education included those who checked four years of college or more.

Table 5. Responses of Non-Indian students to selected questions about education by proportion responding in "high"[a] category of each question by level of perceived family income.

Questions about Education	NON-INDIAN							
	LOW INCOME		AVERAGE INCOME		HIGH INCOME		TOTAL	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
1. Amount of thought given educational plans-A LOT	37	44	58	46	55	58	150	49
2. Students' educational aspirations-COLLEGE	37	44	66	54	55	61	158	53
3. Students' educational expectations-COLLEGE	25	30	57	46	44	54	126	42
4. No. of times students discussed educational plans with counselor-3 OR MORE	2	3	9	7	9	11	20	7
5. No. of teachers students discussed educational plans with-3 OR MORE	4	13	6	10	8	20	18	14
6. Fathers' educational aspirations for their children-COLLEGE	27	48	55	57	50	66	132	58
7. Mothers' educational aspirations for their children-COLLEGE	34	52	61	57	51	67	146	59
8. Fathers' interest in school work of their children-A LOT	43	55	67	58	61	69	171	61
9. Mothers' interest in school work of their children-A LOT	50	63	89	77	62	74	201	72
10. Fathers' pressure on their children to do well in school work-QUITE A BIT + A LOT	15	20	28	25	23	28	66	25
11. Mothers' pressure on their children to do well in school work-QUITE A BIT + A LOT	33	38	69	42	8	27	110	39

[a]The "high" category for each question was developed from the responses students would use in everyday language, e.g., quite a bit and/or a lot, or from natural or logical scales, e.g., a "high" level of education included those who checked four years of college or more.

Table 6. Responses of students in combined low and high income group to selected questions about education by ethnicity, and proportion responding in "high" category of each question.

Questions about Education	Indian		Non-Indian		Percentage Difference
	Number	Percent	Number	Percent	
1. Amount of thought given educational plans-A LOT	35	48	92	51	- 3
2. Students' educational aspirations-COLLEGE	30	44	92	53	- 9
3. Students' educational expectations-COLLEGE	23	32	69	42	-10
4. No. of times students discussed educational plans with counselor-3 OR MORE	5	8	11	7	+ 1
5. No. of teachers students discussed educational plans with-3 OR MORE	3	9	12	17	- 8
6. Fathers' educational aspirations for their children-COLLEGE	18	38	77	58	-20
7. Mothers' educational aspirations for their children-COLLEGE	25	45	85	60	-15
8. Fathers' interest in school work of their children-A LOT	29	47	104	63	-16
9. Mothers' interest in school work of their children-A LOT	41	64	112	69	- 5
10. Fathers' pressure on their children to do well in school work-QUITE A BIT + A LOT	19	31	38	24	+ 7
11. Mothers' pressure on their children to do well in school work-QUITE A BIT + A LOT	13	38	41	35	+ 3

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